

## CLAIMS

What is claimed is:

- Sub A1
- 1 1. In a data processing system having a cache, a method for generating uncached objects  
2 comprising:  
3 (a) locating at least one component that is related to an uncached object; and  
4 (b) constructing, by the cache, the uncached object from the located at least  
5 one component.
  - 1 2. The method of claim 1 wherein step b further comprises obtaining the located at least  
2 one component.
  - 1 3. The method of claim 1 further comprising obtaining the at least one component from  
2 the cache and a second component from a storage system.
  - 1 4. The method of claim 1 further comprising obtaining the at least one component and  
2 the second components from a storage system.
  - 1 5. The method of claim 1 further comprising deriving the at least one component from  
2 an object.
  - 1 6. The method of claim 1 further comprising storing the constructed object in the cache.
  - 1 7. The method of claim 1 further comprising generating, by the cache, a request for the  
2 object.
  - 1 8. The method of claim 1 wherein the object is an image file.
  - 1 9. The method of claim 8 wherein the image file is a JPEG-2000 file.
  - 1 10. The method of claim 1 wherein the at least one component is an image file.
  - 1 11. The method of claim 10 wherein the image file is a JPEG-2000 file.
  - 1 12. The method of claim 1 wherein the object is a web page.

- 1 13. The method of claim 1 wherein the at least one component is a web page.
- 1 14. The method of claim 1 wherein the object is a document.
- 1 15. The method of claim 1 wherein the at least one component is a document.
- 1 16. A cache system comprising:
- 2 a cache memory storing one or more objects;
- 3 logic element determining that an object is missing from the memory; and
- 4 a processor obtaining at least one component related to the missing object and
- 5 constructing the object in response to the logic element determining that the
- 6 object is missing from the cache memory.
- 1 17. The cache system of claim 16 wherein obtaining the at least one component further
- 2 comprises obtaining the at least one component from an object.
- 1 18. The cache system of claim 16 wherein the object is an image file.
- 1 19. The cache system of claim 18 wherein the image file is a JPEG-2000 file.
- 1 20. The cache system of claim 16 wherein the component is an image file.
- 1 21. The cache system of claim 20 wherein the image file is a JPEG-2000 file.
- 1 22. The cache system of claim 16 wherein the object is a web page.
- 1 23. The cache system of claim 16 wherein the component is a web page.
- 1 24. The cache system of claim 16 wherein the object is a document.
- 1 25. The cache system of claim 16 wherein the component is a document.
- 1 26. The cache system of claim 16 wherein a request is generated by the cache system.
- 1 27. The cache system of claim 16 wherein the cache system is a server.
- 1 28. The cache system of claim 27 wherein the request is generated by a client.

- 1 29. The cache system of claim 16 wherein the logic element determining the requested  
2 object is missing from the cache memory:
- 3 (a) further determining if the components to construct the requested object are  
4 in the cache memory; and
- 5 (b) further determining the components missing from the cache memory  
6 required from the storage device to construct the object.
- 1 30. The cache system of claim 29 wherein the cache system is generating the request for  
2 an object.
- 1 31. In an image server having a cache, a method for obtaining an image comprising:
- 2 (a) obtaining the image from the cache, if the image is present within the  
3 cache, otherwise,
- 4 (b) constructing the image from one or more cached image components, if the  
5 cache has one or more cached image components from which the image  
6 can be produced, otherwise,
- 7 (c) determining whether to construct the image using an uncached image  
8 component stored in a remote storage.
- 1 32. The method of claim 31 further comprising constructing the image from the uncached  
2 image component stored in remote storage and one or more cached image  
3 components, upon determining to construct the image using the uncached image  
4 component.
- 1 33. The method of claim 31 further comprising constructing the image from the remote  
2 stored image component upon determining to construct the image using the uncached  
3 image component stored in the remote storage.
- 1 34. The method of claim 31, further comprising obtaining the image from the remote  
2 storage if it is determined not to construct the image.

1 35. The method of claim 31 wherein the image is a JPEG 2000 image.

1 36. In an image server having a cache, a method for obtaining an image comprising  
2 obtaining the image from the cache, if the image is present within the cache,  
3 otherwise constructing the image from image components obtained from one of the  
4 cache only, remote storage only, and a combination of the cache and the remote  
5 storage.

1 37. The method of claim 36 wherein the image is a compressed image.

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